

REMARKS

Summary

Claims 1-16 were pending. An amendment was filed on July 28, 2003, and the Examiner responded with an Advisory action on August 12, 2003 indicating that the request for reconsideration was denied, but the amendment was entered. In the event that the Applicant has misinterpreted the result of the Advisory action, this paper serves to request the entry of the amendment filed on July 28, 2003.

Rebuttal to Examiner's Response to Amendment

In maintaining the rejection of the claims in the Advisory action, the Examiner has addressed the arguments presented in the amendment filed on January 21, 2003, without commenting on the amendments and remarks made in the paper of July 28, 2003. The Applicants reiterate the arguments presented previously and provide further detail herein, and respectfully request reconsideration of the rejections.

In the the Office action of April 4, 2003, commencing on page 5, the discussion focuses on the time dependent waveforms shown in Tsujihara et al. (US 5,504,528; "Tsujihara"). All of the figures illustrating waveforms (viz., Figs. 2, 3a-d, 5, 6, 10 and 11) depict time waveforms of the voltage drive to a grid of a cathode ray tube (CRT) and not physical display areas. Fig 10 (a) can be considered as a representation of the horizontal scan drive voltage in the CRT. It illustrates a horizontal scan interval, followed by a vertical blanking interval, followed by three horizontal scan intervals. The horizontal deflection of the CRT electron beam is proportional to the applied voltage. During the vertical blanking period, and during the horizontal blanking periods (corresponding to the short negative going pulses in Fig. 10 (f)), the applied horizontal drive voltage is zero. So, during these periods, the electron beam is not being scanned, and there is no visible area on the CRT screen corresponding thereto. No matter what the characteristics of the voltages contained in the other time-dependent waveforms during the blanking intervals, they are internal to the television monitor and are not displayed;

there is no corresponding blank data area. Only the conventional image area is displayed.

In particular, the Applicants respectfully traverse the Examiner's statement beginning on the second from last line of page 5 of the Office action:

The black level of the blank area is applied to the first electrode and the black level of the image data is applied to the second electrode. [Emphasis added].

The black level which is identified, for example, in Fig. 6h occurs during the horizontal blanking period, and this time period is well known in the art as one in which there is no data displayed. Hence it cannot be identified with a physical area on the CRT screen. There is only one area on the CRT that can be perceived by the viewer as a physical area, and that is an image data area, which constitutes the entire viewable area of the CRT.

However, as recited in Applicants' Claim 1, the screen of the present arrangement is capable of displaying an image data area and a blank data area, the first black level of the image data area being independent of the second black level of the blank data area. The black level characteristics of each area of the display in the arrangement of Claims 1 and 10 are separately and independently controlled. Neither Sato et al. (US 6,249,362; "Sato") nor Tsujihara describe a device where there are two distinct display areas, an image data area and a blank data area, with the black level of each one being separately set, and where the black level of the image data to be displayed in the image area is responsive to a control operation. Blank area data is displayed in the blank data area and is separately generated from the image area data displayed in the image data area.

The cited references neither suggest nor teach an image display device having two distinct display areas, each having independently controllable black levels, with display data separately generated for the blank data area and image data area. The

Applicants respectfully submit that the Examiner has not made out a *prima facie* case of obviousness and the claims as now presented are allowable.

Claims 2-4 and 11-13 are patentable as claims dependent on a patentable independent claim. However, they are also independently patentable as discussed below.

Claim 2 recites a variable resistor as control of the black level of the image data. The term variable resistor customarily means a resistance whose value can be controlled by some external intervention such as a person turning the knob of a potentiometer, although digitally settable devices are also known. However once the resistance is set, it is intended to remain constant until there is once more an intervention. Tsujihara teaches a variable gain amplifier used in a feedback control circuit (column 7, line 66 to column 8, line 9). The gain of the amplifier is therefore dynamically controlled as part of a feedback control circuit. In the arrangement of Claim 2, the variable resistor does not function as a variable gain amplifier, as the resistor value is fixed except where there is external intervention. Therefore Claim 2 is independently patentable as it is not taught or suggested by the cited references. Claims 7 and 11 recite a similar arrangement and are likewise patentable

As to Claims 3, 8, and 12, the apparatus of Sato is intended to convert photographic images taken with the APS (Advanced Photo System) system wherein information on the conditions under which the film photograph has been taken are encoded on the film outside of the image area (IX information) to aid in the preparation of digitized images from the negatives. Many parameters can be recorded. The disclosure in Sato mentions only a very few of them. As background, to aid in the understanding these remarks regarding Sato, the Applicant have appended a copy of a magazine article outlining the APS system to the previous amendment. (Applicants do not believe that the information in the article is material to the patentability of the present invention, but the article aids understanding the terminology used by Sato.) On page 38 of the article, one can see that the "Rear (back) light" information is determined not by

the absolute intensity of the illumination in the vicinity of the video camera of Sato's apparatus (which is imaging an image previously photographed on film and then developed), but the illumination in the field of view of the film camera at the time the original film image was obtained, and as interpreted in accordance with Note 13: "The camera assumes there is backlighting if the central subject is darker than the background". Using this and the "Flash Fire" (see Note 10) some inference might be drawn regarding the conditions under which the photograph was taken at some time in the past (prior to photographic development of the film); but it is indirect, and represents a previously recorded photographic image taken with a film camera which was obtained at a place different from the video camera and under different illumination conditions than that of Sato's apparatus. The contrasts with arrangement of Applicants' Claim 3 where the black level of the image data produced from the output of a video camera is dependent on "the illuminance around a video camera that outputs said analog image signal."

Since Sato does not teach or suggest the arrangement of Claim 3, or of similar Claims 8 and 12, they are independently patentable.

Claims 4, 9 and 13 are dependent on claims 3, 8, and 12 respectively which the Applicants submit are patentable over the cited references, and as such are patentable. In addition, Claim 4 recites a "black-level setting mechanism [which] outputs a lower-level reference voltage corresponding to illuminance detected by said illuminance sensor." Tsujihara adds a BRT reference signal to the pedestal voltage level, during a vertical blanking interval (Fig. 5 (a,c)), an interval which does not correspond any portion of the waveform described as relevant to the arrangement of Claim 4, nor does it correspond to illuminance in the vicinity of the video camera. As such, the arrangement of Claim 4 is not taught or suggested by Tsujihara and Claim 4 is independently patentable. Claims 9 and 13 recite similar arrangements and are likewise patentable.

As to amended Claim 5, in this instance the Examiner, citing Sato, has compared image data that would have been displayed (but was not), with a modified version of the

same image data that is actually displayed. This is not the same thing as having image area data, however modified, and blank area data, both being displayed on a display in a manner that the person viewing the display perceives both display areas to be present simultaneously but separate from one another.

Since Sato does not teach or suggest the arrangement of Claim 5, it is independently patentable.

Claim 6 depends on Claim 5, which is patentable, but Claim 6 is also independently patentable. There is no display area on the CRT display taught by Tsujihara corresponding to the vertical blanking period which is when the BRT signal is present. The BRT signal can only be used to control a characteristic of the entire display since there are no separate areas thereof. The apparatus recited in Tsujihara is analog in its implementation, and does not use an A/D converter or a modification of the black level of the image area data to be displayed prior to combination with blank area data having a separate and independent black level. Claim 6 recites an arrangement where there are two displayed areas, the black levels of each are independent of each other, and the black level of the image data is set by adjusting a voltage at the A/D converter. Thus Tsujihara does not teach or suggest the arrangement of Claim 6, which is therefore patentable.

The Applicants respectfully traverse the rejection of Claims 14-16. The Examiner states that "a blank area on a screen is a pixel and is separated from the rest of the display by lines." (Office action page 5 lines 2-4). The Applicants submit that the entire screen is comprised of a plurality of pixels, which may be addressed horizontally in a sequential manner to create a scan line, with successive scan lines vertically displaced to form a perceived image. The pixels of the blank data area of the display of Claims 14-16 are differentiated from those of the image data area of the display by the characteristics of the data addressed to each specific pixel. In the case of the image data area, the data corresponds to image data obtained by the video camera, for example, while the data for the blank data area corresponds to that generated by the

blank data generator. The blanking marker, at the beginning and end of the blank data area, is separately generated. To create a vertical line on the display as recited in Claims 14-16, a single pixel may be set to a white level, and white pixels of successive horizontal scans arranged above one another such that a vertical white line is perceived by an observer. Once again, there are two separate areas actually displayed on the screen, a blank data area and an image data area, and the separately generated vertical white marker line used to define the boundary of the blank data area is interposed between them. It does not correspond to the BRT signal as taught by Tsujihara since the BRT signal is not displayed; the BRT signal is present only during the vertical blanking interval, which occurs only once in each group of scan lines comprising a frame of displayed data, and the BRT signal has an effect on each pixel of the entire display. Since Tsujihara does not teach or suggest the arrangement of Claims 14-16, they are independently patentable.

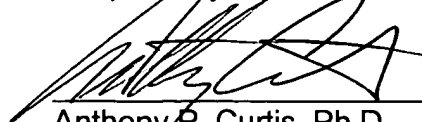
Conclusion

Claims 1-16 were pending.

In view of the arguments presented the Applicants respectfully request that the rejection of Claims 1-16 be withdrawn, and a timely notice of allowance issue.

In the event that the Examiner intends to maintain the rejections, the Applicants respectfully request an interview to consider the merits of the application.

Respectfully submitted,



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